

INTERNATIONAL SEARCH REPORT

 Internat Application No
 PCT/US2005/010014

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B60G17/015 B60K31/00 B60T8/00 B62D6/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B60G B60K B60T B62D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 282 474 B1 (CHOU CLIFFORD C ET AL) 28 August 2001 (2001-08-28)	1,15
Y	abstract; figures column 3, lines 2-52	10-14
A	US 2003/212482 A1 (LU JIANBO ET AL) 13 November 2003 (2003-11-13)	1,15
Y	abstract paragraphs [0034], [0035]	10-14
A	WO 03/081180 A (AUTOMOTIVE SYSTEMS LABORATORY, INC) 2 October 2003 (2003-10-02)	1,10,15
	abstract page 17, lines 17-27 page 32, line 28 - page 35, last line	
	- / - -	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

17 June 2005

Date of mailing of the international search report

26 AUG 2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/058118 A1 (WILSON KITCHENER C) 27 March 2003 (2003-03-27) abstract; figures paragraphs [0013], [0014], [0257] - [0264] -----	1,10,15
A	US 2003/182042 A1 (WATSON W. TODD ET AL) 25 September 2003 (2003-09-25) abstract paragraphs [0026], [0032], [0096], [0097], [0099], [0100], [0132] -----	1,10,15
A	US 2003/158633 A1 (SCHUBERT PETER J) 21 August 2003 (2003-08-21) abstract paragraph [0043] -----	1,10,15
A	EP 1 386 802 A (FORD GLOBAL TECHNOLOGIES, LLC) 4 February 2004 (2004-02-04) abstract; figures paragraph [0025] -----	1,10,15
A	US 2002/056582 A1 (CHUBB ERIK CHRISTOPHER ET AL) 16 May 2002 (2002-05-16) abstract; figures -----	1,10,15
A	US 5 749 984 A (FREY ET AL) 12 May 1998 (1998-05-12) abstract; figures column 3, line 23 - column 4, line 51 -----	3

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2005/010014

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6282474	B1	28-08-2001	DE	10125871 A1	14-02-2002
			GB	2368439 A ,B	01-05-2002

US 2003212482	A1	13-11-2003	DE	10320544 A1	27-11-2003
			GB	2388435 A	12-11-2003

WO 03081180	A	02-10-2003	AU	2003220396 A1	08-10-2003
			EP	1487678 A2	22-12-2004
			WO	03081180 A2	02-10-2003
			US	2003182041 A1	25-09-2003

US 2003058118	A1	27-03-2003	EP	1390218 A2	25-02-2004
			WO	02092364 A2	21-11-2002

US 2003182042	A1	25-09-2003	AU	2003214228 A1	08-10-2003
			WO	03081179 A2	02-10-2003

US 2003158633	A1	21-08-2003	NONE		

EP 1386802	A	04-02-2004	US	2004059480 A1	25-03-2004
			EP	1386802 A1	04-02-2004
			EP	1386803 A1	04-02-2004
			EP	1386805 A2	04-02-2004
			EP	1386806 A1	04-02-2004
			JP	2004131070 A	30-04-2004
			JP	2004131071 A	30-04-2004
			US	2004010383 A1	15-01-2004
			US	2004019418 A1	29-01-2004
			US	2004030473 A1	12-02-2004
			US	2004064246 A1	01-04-2004
			US	2004181329 A1	16-09-2004

US 2002056582	A1	16-05-2002	US	6356188 B1	12-03-2002
			US	2004010383 A1	15-01-2004
			US	2004019418 A1	29-01-2004
			US	2004030473 A1	12-02-2004
			US	2004064246 A1	01-04-2004
			DE	10146724 A1	18-04-2002
			GB	2367044 A ,B	27-03-2002

US 5749984	A	12-05-1998	CA	2189688 A1	30-06-1997
			JP	3350896 B2	25-11-2002
			JP	9188113 A	22-07-1997
